ASX RELEASE

12 March 2012

NOLANS RARE EARTHS PROJECT: MAJOR RESOURCE UPGRADE BY ARAFURA AT NOLANS BORE

Highlights

- **Major upgrade in JORC resources at Nolans Bore;**
- **Now 46 million tonnes @ 2.5% REO for 1,150,000 tonnes of contained Rare Earths;**
- **Increase on 2008 resources of 52% in total tonnes and 36% in contained Rare Earths;**
- **Measured and Indicated Resources total 25.3 million tonnes and account for 55% of total resource.**

Australian Rare Earths company **Arafura Resources Limited** (**ASX: ARU**) (**Arafura** or **the Company**) is pleased to announce a substantial upgrade in JORC Mineral Resources at its 100 per cent-owned Nolans Bore Rare Earths deposit.

Arafura commissioned AMC Consultants Pty Ltd of Perth, Australia, to complete this independent estimate of Mineral Resources. A summary is provided as an attachment, "Nolans Bore Rare Earth Deposit Mineral Resource Statement".

Total Mineral Resources at Nolans Bore are now estimated at:

46 million tonnes @ 2.5% REO, 11% P_2O_5, 0.41 lb/t U_3O_8

using a cut-off grade of 1.0% REO. **This represents a 52% increase in total resources on the November 2008 estimate of 30.3 million tonnes**.

Classification of total resources at Nolans Bore into Measured, Indicated and Inferred Resource categories are shown in the table below. In-situ resources of Rare Earths, Phosphate and Uranium are also shown:

RESOURCES	TONNES (million)	RARE EARTHS REO %	TONNES REO	PHOSPHATE P_2O_5 %	TONNES P_2O_5	URANIUM U_3O_8 lb/t	TONNES U_3O_8
Measured	4.3	3.4	146,200	12	516,000	0.61	1,200
Indicated	21	2.5	525,000	12	2,520,000	0.41	3,950
Inferred	21	2.3	483,000	10	2,100,000	0.37	3,490
TOTAL	46	2.5	1,150,000	11	5,060,000	0.41	8,640

Numbers may not compute exactly due to rounding

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Total in-situ identified resources of Rare Earths, Phosphate and Uranium at Nolans Bore have been expanded by 36%, 30% and 43% respectively, since the November 2008 resource estimate.

The new resource model incorporates the results of all drilling and costeaning activity undertaken by Arafura at Nolans Bore since 2000. It follows a comprehensive resource expansion drilling campaign completed during 2011 (ASX: ARU 14/02/11, 28/07/11, 22/08/11, 13/10/11 and 21/11/11).

Important outcomes resulting from the 2011 program include:

- a 71% uplift in Indicated Resources from the November 2008 resource estimate;
- a 45% increase in higher confidence Measured and Indicated Resources which now total 25.3 million tonnes. These resources may be available for subsequent conversion to Ore Reserves;
- 75% of the identified resources are within 130 metres (528mRL) of the surface and 93% are within 182 metres (475mRL) of the surface;
- mineralisation remains open at depth across the deposit and resource outlines on 475mRL encompass a total area of about 44,000 square metres. In the North Zone strong mineralisation has been intersected as deep as 380mRL (278 metres below surface) (ASX: ARU 13/10/11);
- delineation of a large, steeply dipping, north-south trending zone of mineralisation in the central part of the deposit, now called the Central Zone (refer Figures 1 and 2). This zone accounts for approximately 22% of the total resource and extends down to at least 220 metres below surface (440mRL); and
- all four objectives of the 2011 drilling program (ASX: ARU 30/09/11) have either been met, or exceeded.

Work on development of a mine plan based on the new resource model will now commence and progress on other key work programs, such as further separation of Rare Earths to produce a Cerium Oxide product for customer assessment, continues as previously advised (ASX: ARU 22/02/12).

Arafura's Chairman, Ian Kowalick, said, "Today's announcement underscores my strong view that Nolans Bore is a world class resource of strategic importance to Australia. It represents one of a very small number of secure supply sources of Rare Earth products from a stable geopolitical environment that will see production this decade.

This resource statement brings together the results of a great number of detailed work programs undertaken by Arafura over the past decade. The quality of this work provides Arafura with a solid foundation for a very long-life resource development project that incorporates a substantial mineral processing component. The Company considers that sufficient resource definition drilling has been completed at Nolans Bore to underpin remaining feasibility work streams aimed at converting a sizeable proportion of these Mineral Resources into Ore Reserves.

Importantly, the Nolans Bore resource is exposed at surface and systematic drilling shows it to be open at depth over a large part of the site.

In recent weeks Arafura has articulated the status of its processing technology development program that has been implemented over several years. This has culminated in the successful production of Rare Earth Oxide samples that are undergoing target customer evaluation. The Company is well-placed with the technology to capitalise on today's announcement of a substantial increase in our Rare Earths resource inventory."

- ENDS -

For further information contact:

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Competent Persons' Statements

The information in this report relating to Exploration Results and geological interpretation was compiled by Mr Kelvin Hussey who is a Member of the Australian Institute of Geoscientists. Mr Hussey is a full time employee of Arafura Resources Limited and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the *Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves* (the JORC Code). Mr Hussey consents to the inclusion of this information in the form and context in which it appears.

The information in this report relating to Mineral Resources was compiled by Mr John Tyrrell who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Tyrrell is a full time employee of AMC Consultants Pty Ltd and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the *Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves* (the JORC Code). Mr Tyrrell consents to the inclusion of this information in the form and context in which it appears.

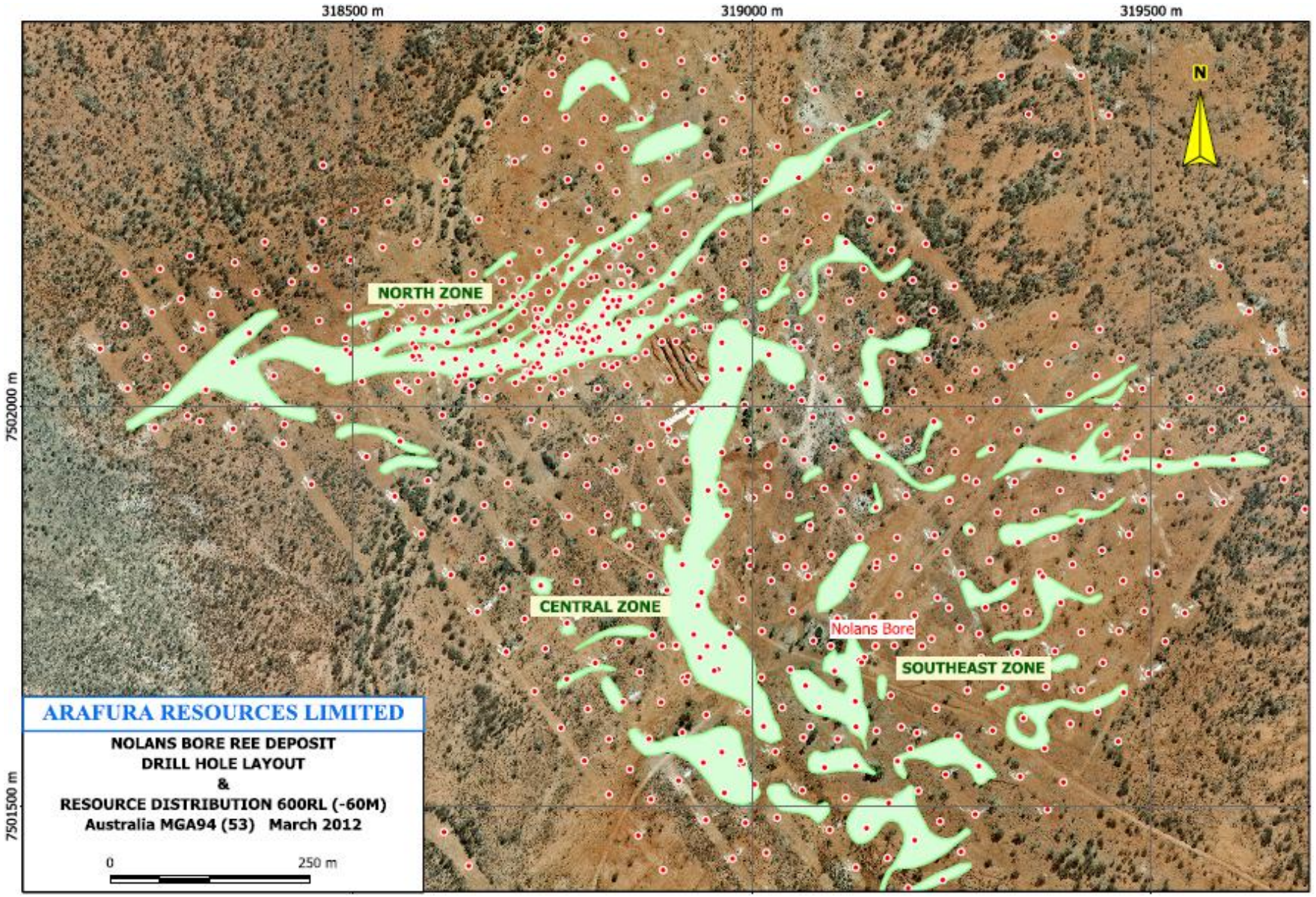

Figure 1: Nolans Bore Rare Earths deposit, Northern Territory. Drill hole layout and distribution of resources at 600mRL (*i.e.* 60 metres below surface).

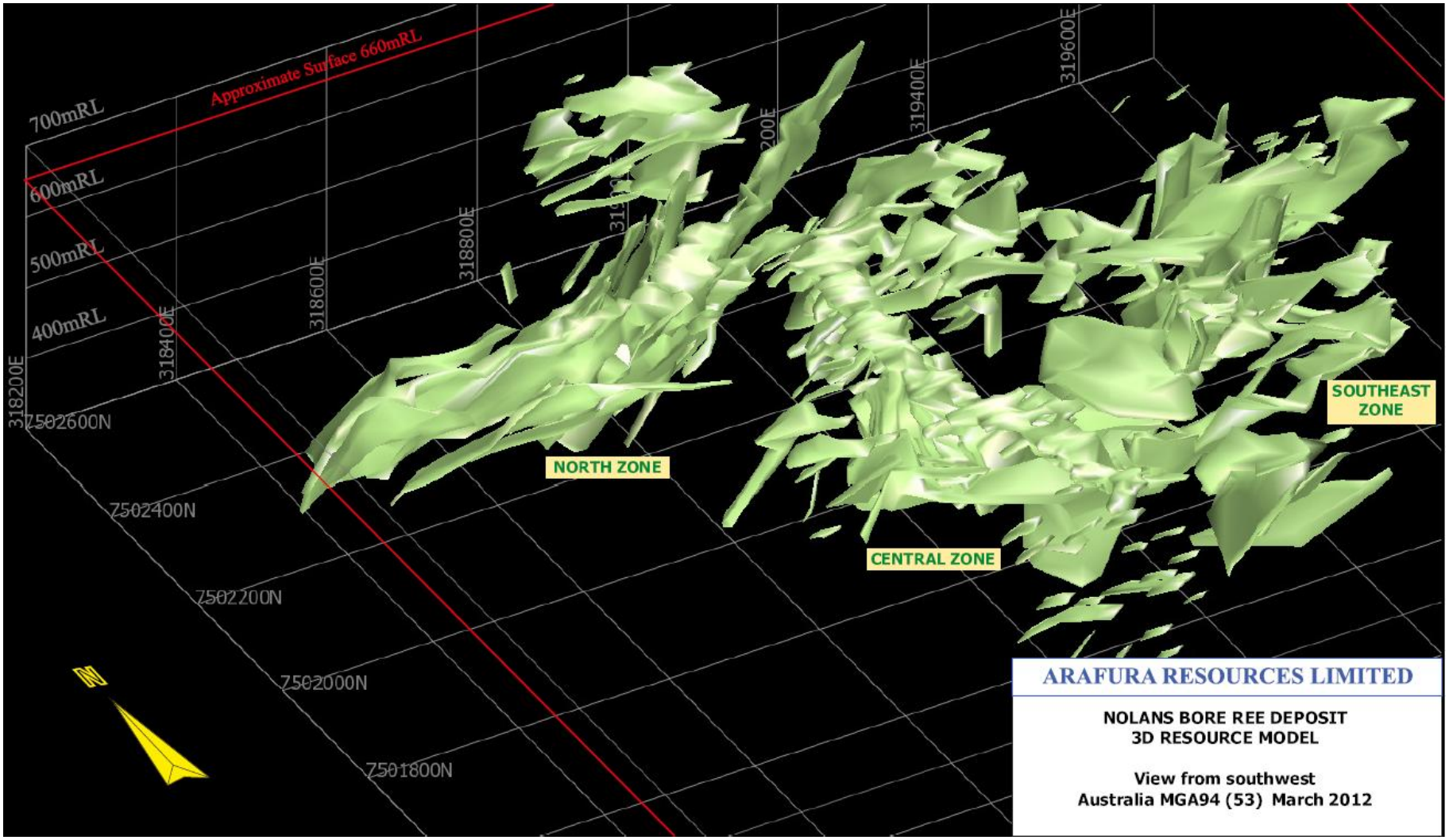

Figure 2: Nolans Bore Rare Earths Resource Model. View from south-west.

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11 March 2012

Mr Richard Brescianini

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Level 5, 16 St Georges Terrace

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Dear Richard,

NOLANS BORE RARE EARTH DEPOSIT
MINERAL RESOURCE STATEMENT

AMC Consultants Pty Ltd ("AMC") has completed a Mineral Resource estimate for Arafura Resources Limited ("Arafura") for the Nolans Bore Rare Earth Deposit in the Northern Territory. The Mineral Resource estimate, classified and reported in accordance with the JORC Code[1], is summarised in Table 1. The estimate has been reported at a 1.0% cut-off applied to rare earth oxide (REO) grade as advised by Arafura.

Table 1 Nolans Bore Rare Earth Deposit Mineral Resource Estimate at 11 March 2012 Reported at 1.0% REO Cut-Off

Category	Tonnes (Mt)	REO# (%)	P_2O_5 (%)	U_3O_8 (lb/t)@
Measured Resource	4.3	3.4	12	0.61
Indicated Resource	21	2.5	12	0.41
Inferred Resource	21	2.3	10	0.37
Total Resource*	46	2.5	11	0.41

* Rounding may cause some computational discrepancies

REO does not include yttrium (Y)

@ calculated from U_3O_8 using the conversion 1 lb/t = 0.0454% U_3O_8

The Mineral Resource estimate reported at a range of REO cut-off grades is listed in Table 2.

[1] Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, The JORC Code 2004 Edition, Effective December 2004, Prepared by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia (JORC).

Table 2 Nolans Bore Rare Earth Deposit Mineral Resource Estimate Reported at a Range of REO Cut-Off Grades

Cut-off (REO%)	Tonnes (Mt)	REO# (%)	P_2O_5 (%)	U_3O_8 (lb/t)@
0.5	46	2.5	11	0.41
1.0	46	2.5	11	0.41
1.5	41	2.7	12	0.44

REO does not include yttrium (Y)

@ calculated from U_3O_8 using the conversion 1 lb/t = 0.0454% U_3O_8

The Mineral Resource estimate is based on assays from reverse circulation and diamond drilling and geological interpretation completed by Arafura. AMC has carried out geostatistical analysis and estimated grades.

GEOLOGY

The Nolans Bore rare earth element-phosphorus-uranium (REE-P-U) deposit is located about 135 km north-north-west of Alice Springs in the Northern Territory.

The mineralisation is a hydrothermal stockwork vein deposit hosted by metamorphosed Palaeoproterozoic igneous and sedimentary rocks of the Aileron Province in the Arunta Region.

The mineralisation is, for the most part, hosted by gneiss and schist which have been intruded by large intrusive bodies (dykes and sills) of pegmatitic granitoid. The granitoid bodies are mutually exclusive from mineralisation although mineralisation appears to post-date the granitoids.

Fluorapatite mineralisation ranges from discrete, narrow, fine-grained veins to wide intervals of massive coarse-grained breccias. The fluorapatite-rich rocks contain up to about 95% fluorapatite and typically contain abundant mineral inclusions of REE-bearing minerals, such as monazite group minerals, allanite, thorite and numerous other REE phosphates, silicates and carbonates. The fluorapatite itself contains variable amounts of REE but a higher proportion of REE is hosted in the mineral inclusions.

Calcsilicate rocks can contain fluorapatite and other REE-bearing minerals and are typically dominated by pyroxene, amphibole, epidote-allanite, carbonate, quartz, plagioclase, zeolites, garnet, scapolites, and titanite. Calcsilicate rocks are strongly associated with the massive fluorapatite mineralisation but tend to be lower grade.

DRILLHOLE DATA

Exploration and resource definition drilling has concentrated on an area of about 1.5 km by 1 km in the vicinity of Nolans Bore which is an area of limited outcrop covered by soil, alluvium, colluvium and calcrete. Drilling indicates the mineralised zones are up to tens of metres thick and several hundred metres long, and extend more than 250 m below surface.

Arafura has conducted exploration over 12 years at Nolans Bore. A total of 64,129 m of reverse circulation (RC) drilling has been completed in 593 drillholes. A further 93 diamond drillholes and 140 diamond drillhole tails have been completed for a total of 28,760 m drilled in NQ2 and HQ3 diameter core. Most of the deposit has been drilled at 40 m spacing in inclined drillholes (60^{o}) to a nominal 250 m drilled depth. Parts of the deposit have been drilled to 20 m spacing.

The mineralisation and associated alteration are geologically distinct from the country rocks. A combination of hand-held Geiger counter measurements and geological observations were used to identify potentially mineralised intervals for sampling. Fluorapatite and calcsilicate-bearing rocks were all sampled and assayed. Clay and kaolin-altered rocks, especially those that exceed background radiation levels, were also sampled.

Drillhole collars were accurately surveyed and down-hole surveys were completed for all accessible drillholes. Drillholes available for re-entry have also been down hole logged for orientation, radioactivity, resistivity, total magnetic field, density, hole diameter and temperature.

All of the drillholes have been geologically and geophysically logged.

RC samples were composited on an equal weight basis to form consecutive two-metre composite samples for assay, taking into account geological boundaries and radioactive character.

Core was photographed and half-core samples cut considering geological and radiometric logging with lengths ranging from 0.25 m to 2.5 m.

A total of 7,702 bulk density determinations were carried out using the water immersion technique. Down-hole density data were also acquired using geophysical probes.

All samples have been assayed at the same primary laboratory (Northern Territory Environmental Laboratories, NTEL). A total of 29,066 routine assays were available for the resource estimate. The assay technique consists of a three-acid partial digest and a combination of inductively coupled plasma (ICP) mass spectroscopy and ICP optical emission spectroscopy.

Arafura conducts quality assurance/quality control (QA/QC) procedures consistent with standard industry practice. QA/QC procedures consist of:

- one in twenty field duplicates
- one in twenty inter-laboratory check assays
- matrix-matched internal standards
- Arafura's certified reference material (CRM)

Inter-laboratory checks and certified reference materials indicate that assay results are within accepted tolerances and that the method is suitable for the type of mineralisation.

GEOLOGICAL INTERPRETATION

Recent drilling demonstrated that the geometry of mineralised zone is much more complex than previously interpreted.

The revised geological model prepared by Arafura reflects the complex geometry encompassing REE-P-U mineralisation and associated alteration guided by a 0.5% REE cut-off while minimising internal waste. Isolated narrow intervals of mineralisation have been excluded from the geological model.

The interpretation incorporates available geological, geophysical, and geochemical data including targeted drilling. Interpretations developed by Arafura on drilling sections were wireframed by AMC and underwent an iterative review process. The distribution of coarse-grained and pegmatitic granitoid was also interpreted as it influences interpretation of mineralised zones.

GRADE ESTIMATION

Grades were estimated for combined REE, uranium and phosphorous. The suite of REE elements is La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb and Lu, noting that yttrium (Y) has not been included as advised by Arafura.

Grades were estimated in eight grouped domains defined by the geological interpretation and drillhole data. The domains were constrained by the interpreted wireframes for mineralisation, waste rock geology and oxidation state.

Two volume models were used to reflect areas of different drillhole spacing. The northern block model has parent block dimensions of 12.5 m (east) by 12.5 m (north) by 5 m (level) in areas with drillhole spacing of about 20 m by 20 m. The southern block model has parent block dimensions of 25 m (east) by 25 m (north) by 5 m (level) in areas of drillhole spacing of about 40 m by 40 m.

Assays were composited to 2 m. A total of 25,047 composites are used in the grade estimation. No topcuts were applied.

Univariate statistics and experimental variography were completed to develop estimation parameter.

Grades were estimated into mineralisation domains using ordinary kriging and into the background model using inverse distance squared. Grades were estimated into parent cells, with all sub-cells receiving the same grade as their parent cells. Estimation was completed in three passes, with cells not estimated in the first pass being estimated in subsequent passes using an expanded search ellipse.

Dry bulk density was assigned to the model using physical determinations and values from down-hole geophysical logging. Densities were assigned by averaging values selected by the mineralisation wireframes within each oxidation state. The average bulk density for the resource estimate is 2.66 t/m^3.

The Mineral Resource classification is based on drillhole spacing, the number of composites used in the estimate, the quality of the estimate and confidence in the interpretation. The estimate is classified as Measured, Indicated, or Inferred Resource as defined in the JORC Code using an interpreted boundary. Parts of the estimate poorly supported by drilling have not been classified as a Mineral Resource.

The estimated REE% grades have been converted to REO% by applying a factor of 1.17 as advised by Arafura. Estimated U% grades have been converted to U_3O_8% by applying a factor of 1.1792. Uranium grades have been expressed as U_3O_8 pounds per tonnes (lb/t) using the conversion 1 lb/t equals 0.0454% U_3O_8. Estimated P% grades have been converted to P_2O_5% by applying a factor of 2.2914.

The estimate was validated by visual comparison of drillhole assays with block model grades and comparison of average composite and estimated grades over northing and level.

JORC CODE COMPLIANCE STATEMENT

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Yours sincerely,

Dean Carville
Principal Geologist